

## **Historic, archived document**

Do not assume content reflects current scientific knowledge, policies, or practices.



THE  
BROWN CREEK  
WATERSHED

WADESBORO  
N.C.

March 15, 1935.



THE BROWN CREEK WATERSHED is being put out by the Soil Erosion Staff once each month, mainly to assist in telling what we are doing and maintain a spirit of good fellowship with the citizens of the community we endeavor to serve.

#### EXECUTIVE

E. S. Vanatta, Asst. Regional Director.  
Miss Daisy Lee Hart, Stenographer.  
W. A. Murray, Jr., Clerk.

-----  
W. B. Little, Asst. Extension Agent.

-----  
H. M. Stott, Asst. Erosion Specialist.

#### SOILS

R. C. Pleasants, Asst. Soil Expert.

#### AGRICULTURAL ENGINEERING

Donald Christy, Asst. Agricultural Engineer.

#### AGRONOMY

A. A. Cone, Asst. Agronomist.  
J. E. Michael, Asst. Agronomist.

#### FORESTRY

H. P. Hagge, Forester.  
L. B. Hairr, Asst. Agricultural Aide.

Directing personnel for the ECW Camp at Polkton are as follows:

W. B. McManus, Superintendent.  
R. B. Stamey, Engineer.  
S. W. Meyers, Foreman.  
S. J. Crocker       "  
C. S. Faw           "  
C. A. Neal          "  
C. W. Thompson     "  
M. L. Ross          "  
J. F. Martin       "  
B. W. Ingram, Mechanic.  
W. L. Teal, Clerk-Stenographer.

Seventy per cent of the Brown Creek area is under cooperative agreement and we would have more but for the fact that contract writers have been called to the temporary duty of helping the farmers who have already signed get started with their plans.

# SPLICING THE ROPE

## STANDARD OF LIVING

The basis of obtaining the good things of life is the soil. Abundance of natural resources (cheap raw materials) are responsible for our present high standard of living compared to the older settled parts of the world. We are as yet a new country. If we keep repairs made and conserve we can postpone for many thousands of years the arrival of conditions as exist today in parts of the old world where EROSION has taken its deadly toll.

OUR LEVEL...

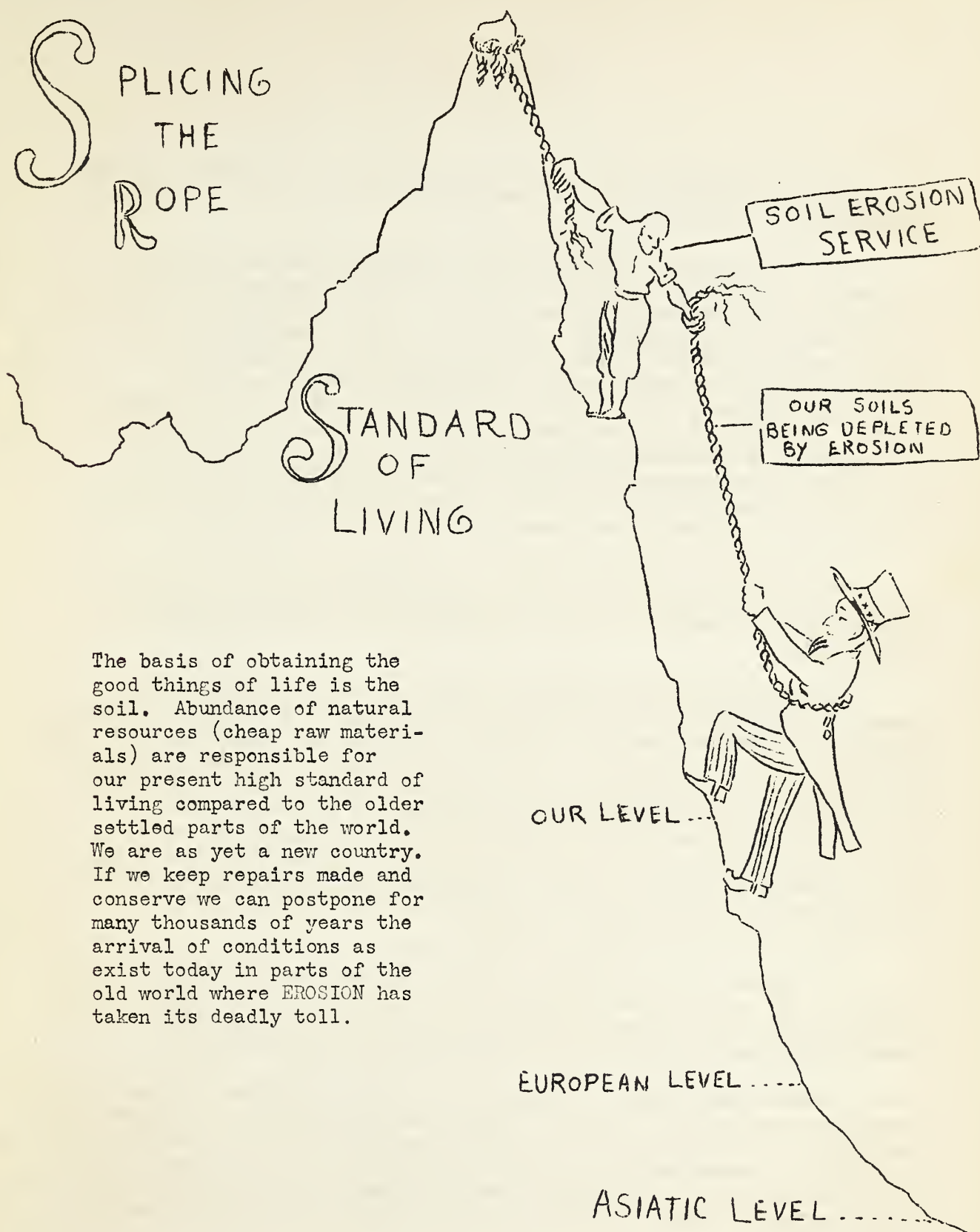
EUROPEAN LEVEL.....

ASIATIC LEVEL.....

HUNGER-CHAOS-DEATH-

SOIL EROSION  
SERVICE

OUR SOILS  
BEING DEPLETED  
BY EROSION





## AGRONOMY NOTES

A. A. Cone.

Don't read this if you are not interested in controlling erosion, increasing the fertility of your lands and insuring a certain degree of independence for you and yours.

All those who are erosion control minded and who have signed cooperative agreements are interested in the program being put on by the Soil Erosion Service on Brown Creek. Do not throw any paper or letter away before reading the contents of same. Usually there are helpful suggestions and ideas which might be used to advantage and especially legal documents such as agreements, contracts, notes, mortgages, receipts, etc., should be placed in a safe and convenient place. A farmer stated the other day that he did not have a copy of his cooperative agreement and therefore was at a loss to follow the provisions in the contract. This particular contract was mailed to the farmer as was done in the case of every cooperator and the farmer is at a loss to follow a plan because he had lost the agreement.

It will be necessary to refer to the agreement often and over a period of five years, and greater care should be exercised in their handling than is usually done by a certain class of people in handling greenbacks.

The agreement carries with it a map of the farm, showing the number given to each field, including the acreage. In addition to this there is included a five year cropping plan which the cooperator has agreed to follow over his signature. We are now mailing to each cooperator a material list sheet which shows all materials and the amount of material to be furnished by the Soil Erosion Service. It can be determined by looking at this sheet which fields certain materials such as seeds, lime and fertilizer are to be applied in, and the quantity to be used. It is expected that all materials furnished by the Soil Erosion Service will be used in the fields so designated in the agreement regardless of whether the farmer changes his mind.

The purpose of furnishing certain material, which is the present policy of the Soil Erosion Service, is to get the erosion control program under way in a satisfactory manner. In the future farmers will be expected to furnish such seeds as the cropping plan calls for.

Another busy season is here and rapid fire decisions are sometimes necessary on the farm where there are not carefully laid plans governing the farm program. Good planning on the farm is more important than the expenditure of physical effort when not wisely used. It has been found that a reasonable amount of physical skill combined with a like amount of mental effort gets results that are more satisfactory to the farmer.

The soil erosion control program will be successful to the extent that a good crop rotation is followed and terraces and terrace outlets maintained. Benefits are not forthcoming over night. Several years will be required to get extensive results, for soil improvement is a slow process, just as soil depletion is a slow and ruinous process. The latter tends to have the advantage in that it moves and accomplishes its purpose more rapidly. Any farmer who does not incorporate the best improved practices applicable to his farm is inviting the inevitable result which follows in the wake of depleted soil fertility. Such a practice also calls for higher fertilizer expenditures, thus increasing the cost of production while a soil conservation program cheapens crop cost and widens the margin of profit. Under such a program cheaper food and feed crops are possible and a more stabilized agricultural population in the making.

Soils lose their fertility in three ways; first, by leaching, particularly with sandy soils having sandy subsoils; second, by erosion on the rolling and steep areas of the state in which the surface soil is carried away in large quantities by heavy rains to lower places such as bottoms, ditches and streams to fill them up; third, by removal of crops.

The loss by erosion is the greatest and thousands of acres of cultivated land are so badly affected by the operation of this factor each year that they are more or less disqualified for the profitable production of crops. To reduce the destructiveness of erosion to a minimum, the following practical means are suggested and furthermore are being put into practice by the Soil Erosion Service in the Brown Creek area.

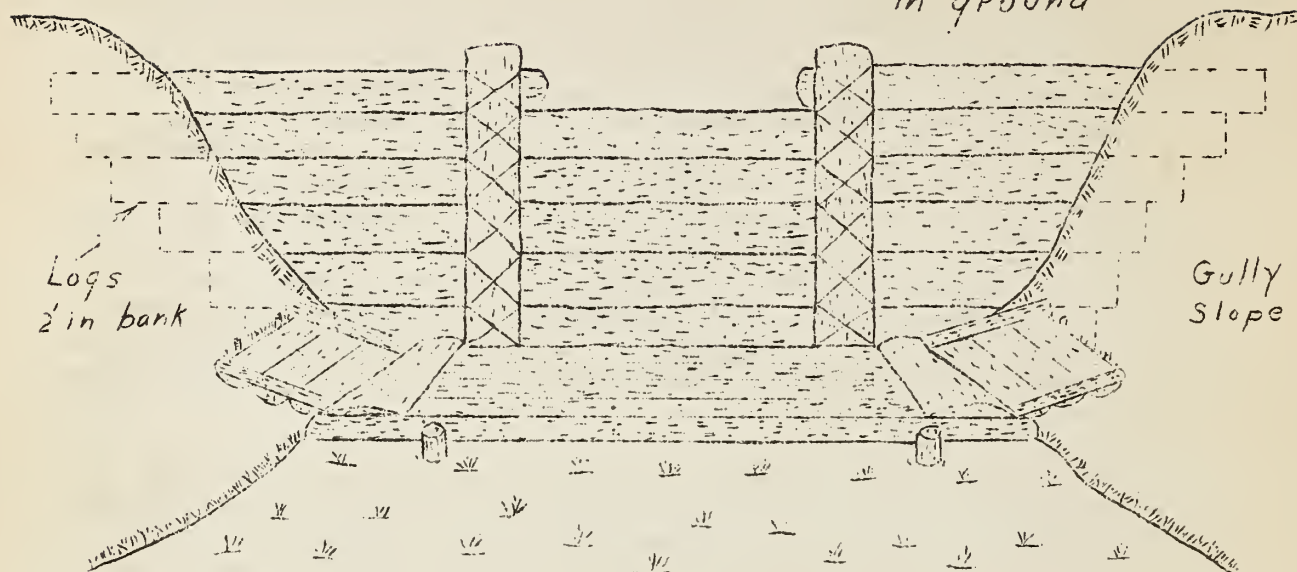
- (1) By construction and maintenance of a proper system of terracing.
- (2) As far as possible keep the land thoroughly covered with cover and soil-binding crops throughout the year.
- (3) By gradually deepening the soil and keeping it fairly well stocked with well decomposed organic matter.

A sufficient supply of lespedeza is now on hand and farmers may get same by calling at the warehouse at Polkton, N. C. Lime is also being delivered at this time and will continue on through March, and every farmer who has lime on his agreement is expected to arrange to get it hauled from the nearest railroad point.

# LOG DAM

Agricultural Engineering  
-Donald Christy-

Posts 2'  
in ground



Those who are constructing contour furrows would do well to study and copy those constructed by Mr. E. C. Mills, Mr. Mills has made a good job of his system.

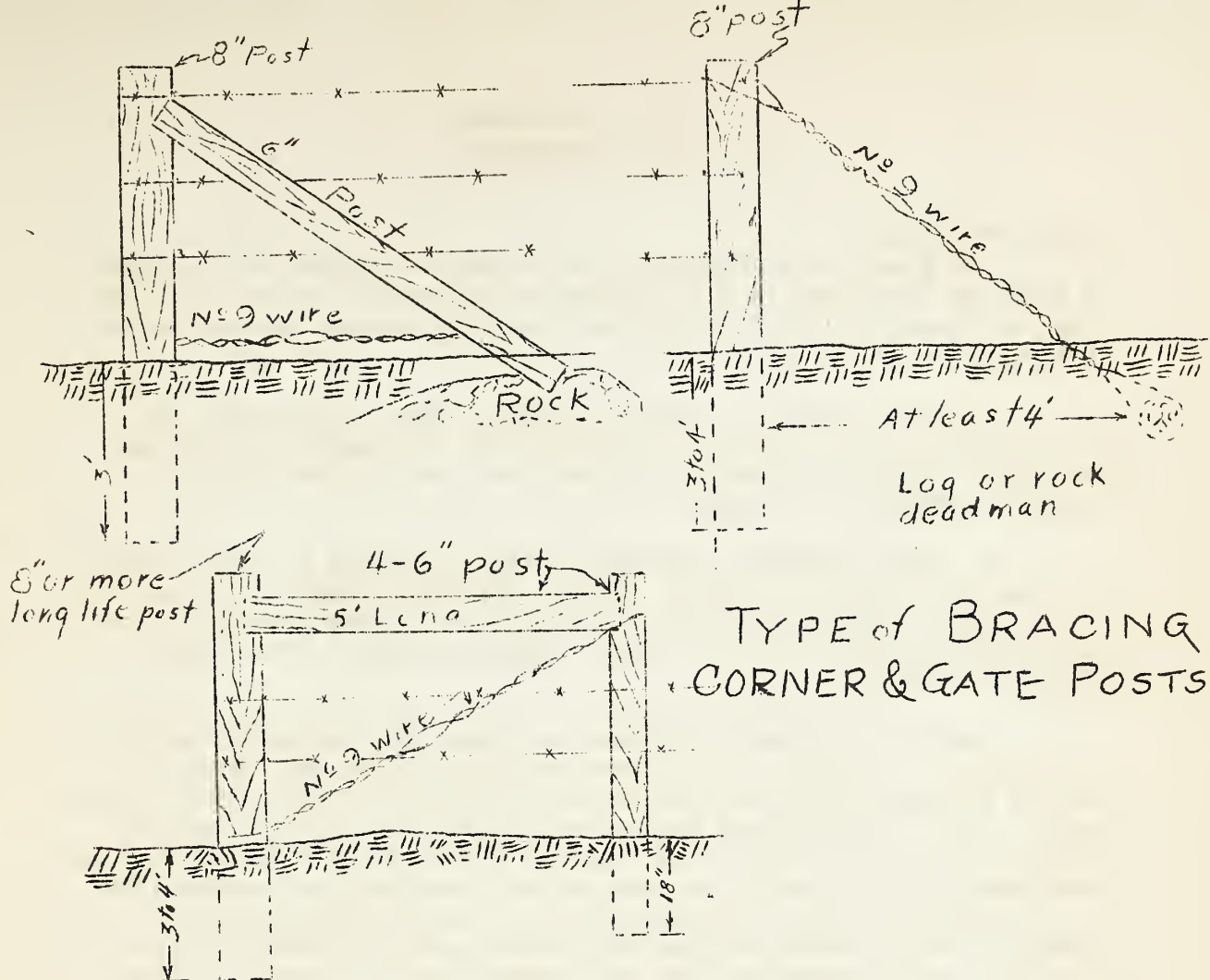
The log dam is an important structure for gully control work. They should not be high but should hold enough water and silt to allow vegetation to get a start. It is important that a vegetation be established immediately. These structures should extend well into the bank and bottom of the gully, and weir notch should be constructed large enough to carry the water from the drainage area.

There is about 4,200 acres to be planted to cotton this spring. It will only be possible to get to about 15% of this land before it is too late. Within the next few days plans will be complete as to the order and amount of land that we can get to. Those who will get cotton land terraced will be notified as far in advance as possible. Then just as soon as cotton land is out of the way the other crop lands in order of their planting time will be terraced.

There are those that can strip crop the land so that terraces can be constructed in the strips while cotton will be grown between these strips. It will make it easier for all if those who wish to do this let us know as far in advance as possible. We can stake these strips so that plowing and field work can go on.

In cases where land is already staked to be terraced but it is time to prepare for a crop the cooperator may mark with a plow the line of stakes by making a back furrow on this line. The stakes are all marked making it possible to be sure of the line. It will help us if thos marked outlet and crest be replaced when they are plowed up.





A fence is no better than its corners or gate ways. It is really a saving of time to properly install the corner and gate post. The three sketches above are more or less self explanatory. These corners will stay a long time requiring only the fence be stretched occasionally. With such corners the fence can be really stretched.

\*\*\*\*\*  
**COOPERATIVE AGREEMENTS**

H. M. Stott.

Farmers continue to sign cooperative agreements as fast as the agreement men can contact the landowners. The week ending March 8th, 335 agreements had been signed, for 401 farms, covering 46,978 acres. Since the last issue of our bulletin the following farmers have signed cooperative agreements:

G. B. Walters  
 R. E. Rorie  
 Mrs. C. B. Ledbetter  
 Mrs. C. W. Sturdivant  
 Anson County Welfare Dept  
 E. C. Tadlock  
 Elizabeth Leak  
 F. J. Kirk  
 Mrs. A. K. Watts  
 Mrs. R. Smith  
 H. T. Cheers  
 Joseph Smith

L. R. Caudle  
 J. M. Williams  
 Charlie Smith  
 R. D. Hildreth  
 K. D. Crowder  
 F. A. Preslar  
 C. I. Allen  
 Catherine Horne  
 J. A. Chapel  
 Mrs. W. F. Humbert  
 Gaston Leak  
 Mrs. E. S. Little

Jim Leak  
 Miss Sadie B. Griffin  
 Paul C. Maske  
 Miss Minnie Griffin  
 J. A. Brooks  
 T. E. Stanley  
 J. L. Brewer  
 James W. Covington  
 C. C. Allen  
 J. Hurley Riggins  
 Mrs. T. R. Troutman  
 J. A. Winfield

SOILS DEPARTMENT  
R. C. Pleasants.

LIMING OUR SOILS

The practice of applying lime to soils to increase the yields of crops has been more or less common in the eastern states since the first settlement of this country and has been followed in many parts of Europe for centuries.

The term "liming" as used in farming operations means the application to the soil of the element known to chemists as calcium. The soils of this area are of a nature that greatly need and will favorably respond to liming.

If soils generally contain sufficient calcium for the growth of crops the question naturally arises, why apply lime? The answer is that lime brings about changes in soils that makes them more suitable for the growth of some crops. Liming does more than supply calcium to plants.

One of the principal effects of liming is the neutralization of acidity. All soils contain some organic matter, the remains of plants, previous crops, or similar material that has been added to the soil. This organic matter decays in the soil and in this decaying organic acids are formed. These acids may combine with the mineral constituents of the soils, or they may be prevented from accumulating to an injurious extent by drainage or by changes promoted by free access of air. Where this neutralization or change does not take place and acids accumulate, the soil becomes acid or sour. In cases where soils are acid because of the presence of organic acids, the soils contain an excess of organic material, as is the case in muck or peat or in soils containing little organic matter where there is poor drainage.

Both forms of lime used in liming have the power to neutralize acids. Oxide of lime combines directly with the acid, thereby forming a neutral compound. The carbonate of lime enters into a reaction with the acid, whereby carbonic acid gas is liberated and a more neutral compound is formed.

Liming also improves the physical condition of our heavy compacted soils. In heavy soils which contain large proportions of clay or silt, under certain conditions, the fine soil particles become associated so closely that free access of air and water is prevented, a condition unfavorable to plant growth. Under other conditions the fine particles tend to gather in small groups or floccules, each group behaving as a large particle. The soil particles are then said to have flocculated, and the soil has a crumb structure. Liming has been found to favor the flocculation of heavy soils so that better aeration and drainage will occur.

Liming stimulates the proper decomposition of organic matter in soils. One of the advantages of an adequate supply of organic matter in a soil, or of supplying this material by means of manure, fertilizer, or cover crops, is that in decomposing it furnishes food necessary for the growth of the bacteria that render nitrogen in the soil available to plants. It is largely through the decomposition of organic matter or with organic matter that can not grow. A soil without organic matter or with organic matter that can not decompose is worth little for crop production. So liming stimulates the decomposition of organic matter which brings about conditions beneficial to the growing of crops.

Lime may also increase the availability of other minerals in the soil. It has been somewhat generally assumed that lime renders other minerals, especially those containing potash, soluble, and available to the growing crop. This effect varies with different soils.

Another use for liming is that it may furnish needed calcium to plants in the building of tissues. There are soils in which the content of lime in any form is less than the content of any other common element. Thus in growing on such soils crops like clover or alfalfa, that require large quantities of calcium the benefits from liming may be due, in part at least, to the direct supply of calcium.

Probably the most important of all benefits from use of lime under general farming conditions, which includes legumes in rotation, is to create a condition under which legume bacteria may thrive. Most legumes will not do well on an acid soil because the nitrogen producing bacteria require more alkaline conditions. The application of lime counteracts the harmful effects of organic acids in bacterial growth.

Agronomy Department

-J. E. Michael-

At the beginning of the spring planting season there will develop a scarcity of land that can be terraced during the late spring and summer months. It would be a good plan for farmers who want to assist the Soil Erosion Service in keeping their terracing equipment busy and get their land terraced earlier to leave strips vacant in a part of their cotton and corn land where the terraces could be later constructed. These strips should be run out and staked showing the terrace location and will vary from 20 - 30 feet wide depending upon the land slope. A summer hay crop of cowpeas and Sudan grass can be grown on some of the strips and those spaces used as government rental acreage under the Cotton Allotment Contract.

Strips of close growing crops between cotton and corn are a great aid in controlling erosion.

If you are interested in having a part of your land terraced during the spring and summer months notify the Soil Erosion Service and you will be visited and plans made for the fields to be terraced.





*Harold P. Haggie*  
*Forester*

Since the end of the planting season is very close at hand, the Forestry Department is particularly active trying to complete its planting plans for this season. Quite recently about 200,000 pine seedlings, 150,000 locust seedlings and several thousand other tree species, have been received, and it is the hope and desire of the department to have all these planted by the first week in April. To date, approximately 475,000 seedlings have been planted on over 420 acres of land scattered over the area. Before the planting activities cease, the Forestry Department expects to see 750,000 to 1,000,000 trees planted on the Brown Creek Watershed.

In line with the forest planting, the wild-life activities of the Forestry Department reports that to date 36,000 shrubs planted at terrace outlets, 21,000 shrubs in gullies, and 5,000 shrubs on gallspots and eroded slopes. The wild-life division is also sowing large quantities of lespedeza seed on odd corners in the fields, galled spots, gullies, and field borders. In the first week of the seeding operations the division sowed 6,500 lbs. of lespedeza covering an area of over 81 acres. This operation will continue to the first of April, and it is hoped that the seeding together with the shrubs planted will improve the environment for birds and desirable species of game.

Another activity that is proving popular with the farmers is the stand improvement work being conducted under the supervision of the Forestry Department. By this work the department is trying to demonstrate to the farmers of the area the proper treatment of their woodlands. Since only a limited amount of this type of work is to be done, the cutting demonstrations are to be carried on in small plots scattered over the area. Although this work is being held at a minimum at the present time, it is hoped that more will be done with it at the close of the present planting season.

Another timely topic as far as the Forestry Department is concerned is fire. There is probably no one other factor so detrimental to the conservation of soil and water resources as forest fires. The department at this time urges the farmers of the area to be particularly careful with their fires, and offers the following suggestions:

"Do not burn brush on a windy day."

"Never leave a fire untended until the last spark is out."

"Burn against the wind. Burn down hill."

"Broom sedge grass should be plowed under rather than burned - if plowed under such plant material will improve the soil."

"Above all, be careful and sane in dealing with fires."



CONSIDERING THE HUMAN SIDE OF  
THE C C C CAMP.

The educational work that is administered by an able advisor, is of great worth to the service, not only as it pertains to better fitting of our youth for tomorrow's activities, but as it affects them today. It has an extended influence of such magnitude that it is hard to arrive at a definite conclusion as to its ultimate results. We are convinced that those efforts have to do greatly with keeping a certain high morale among the personnel of the Corps at all times.

It is most imperative that a high morale should ever exist in order that the services rendered shall be most effective in respect to their duties to the Army as well as to those of the Using Service.

We are also convinced, that as long as we are able to have, as a part of the personnel, a percentage of higher educationally qualified men, that the morale is more apt to be of a higher standing for this same group. It does extend an influence of a steadying nature.

We have classes in more than ten subjects that are consistently attended by more than fifty per cent of the enrolled personnel. Among these subjects are such ones, as deal, directly with our field operations.

The majority of the enrollees are from farm families. Their work in the field here will be felt in many sections of the state as enrollees return to their homes and put into practice the many things they have learned here.

WHICH SHALL IT BE?

THIS



Fire KILLS TREES AND  
ROBS SOIL

OR THIS



*Bring Back The Pines*